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ABSTRACT

Preceeding the body of the report are statements on the role of the professional sanitarian, trends in their education, methodology of the study, and a summary of its findings. The report is devoted to statistics relating to patterns in employment (employment status, work setting, undergraduate major, primary work function, current work functions, and highest degree attained) and background characteristics (age, education, continuing professional education, and licensure) of all sanitarians licensed by the state. A list of seven references, a sample of the questionnaire used, and an appendix of selected data tables complete the document. (AG)

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SANITARIANS

Licensed in Washington

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June, 1970

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
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All inquiries concerning the report and requests for data should be addressed to Health Manpower Project, Washington State Department of Health, 815, Smith Tower, Seattle, Washington 98104. Data were gathered in cooperation with the Division of Professional Licensing. Data analyses were performed and the report written by Jo Senters, M.A. with supplementary education information supplied by Lynn Cohen, M.Ed., both of whom are research analysts for Health Manpower Project.

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The *Professional* SANITARIAN

The sanitarian is involved in planning, administering and evaluating programs concerned with the elimination and prevention of environmental health hazards. Sanitarian positions require a broad knowledge of any one or a combination of the health, agricultural, physical or biological sciences sufficient to understand the basic concepts, methods and techniques of environmental health hazards.

The United States Civil Service Commission classifies the position of sanitarian with further detail:

"The job of the sanitarian is to:

--plan and administer projects or programs concerned with eliminating and preventing environmental health hazards. This may also include responsibility for planning or conducting an environmental health education or staff development program;

--develop new (and revise existing) standards, methods, and procedures to aid in developing---and maintaining environmental health programs; or

--evaluate and advise on the operation of environmental health programs administered by representatives of public and private agencies or establishments."

"These functions are typically performed in one or a combination of the following or other comparable environmental health areas:

--milk and other dairy products
--food sanitation
--water supply
--refuse and other waste control
--insect and rodent
--shellfish
--recreation, housing, care facilities, or other facilities or institutions." (Reference 7)

TRENDS in Professional Education of the Sanitarian

Introduction

There has been continual professional clarification of who is a sanitarian as the profession has matured and in response to the growing public awareness of environmental problems. In 1969, a model registration act was developed by the National Sanitarians' Joint Council (composed of the major professional associations) specifying the following requirements for qualification as a sanitarian: 1) a Bachelor's Degree with a minimum of 30 credit hours of academic work in environmental health or in the physical and biological sciences, 2) employment full-time as a sanitarian for not less than 2 years, and 3) successful completion of an examination given and conducted by a State registration board.

Washington's licensure laws reflect changes in this profession. Since 1960, applicants for licensure have been required to meet the requirements of a Bachelor of Science or equivalent degree in a related area, serve a six-month "internship" as a sanitarian, and successful completion of the State Board examination. The Washington State registration law has a "grandfather clause" providing for persons employed full-time as sanitarians as of January 1, 1960 to be licensed if they applied for their licenses by July 1, 1960. The number of sanitarians licensed under the clause's requirements is diminishing over time; new developments in the education of the sanitarian assure that persons entering the profession are highly qualified environmental specialists. Several of the new programs are

described below.

New Programs

The Allied Health Professions Personnel Training Act of 1966 authorized basic improvement grants to junior colleges, colleges, and universities that train people for professions which render direct health care. In 1968 environmental health training programs also became eligible for basic improvement grant support.

In Washington state there are two baccalaureate level training programs in Environmental Science which receive basic improvement grant funds. The Master's degree program does not receive these funds.

Washington State University offers a Bachelor of Science and Master of Science Degree in Environmental Science. The program is a multidisciplinary field involving cooperating members from departments in the Colleges of Agriculture, Engineering, and Sciences and Arts. Through the program, students acquire an extensive background and a broad perspective that prepares them for a variety of roles in the study and management of the environment and its specific resources. The student has six optional areas of specialization: Agricultural Ecology, Biological Science, Cultural Ecology, Environmental Health, Natural Resources, or Physical Science. (see reference 5)

Students were first admitted to the program in the Fall, 1968. Fifteen students are currently enrolled in the baccalaureate program, and approximately six are expected to graduate in June, 1971. There are also fifteen students enrolled in the Master's program.

The University of Washington, School of Public Health and Community Medicine, offers a program in environmental health which leads to a Bachelor of Science Degree from the College of Arts and Sciences. The technical aspects of the studies in the natural sciences and health sciences prepares the student to evaluate and prescribe modifications of those environmental conditions which are detrimental to society. Areas of technical application include food and milk sanitation, air and water pollution, housing, vector control, industrial hygiene, and occupational health. Studies in the humanities and social sciences are included in the curriculum. (see reference 6)

The program at the University of Washington was started in 1948. Four academic years of coursework are required for the Bachelor's degree. Eight students graduated in June, 1970, and a Master's degree program is scheduled to admit students in 1971.

The two programs described here are part of a trend in the United States to offer specialized training in areas of high demand. These programs are young and are not yet representative of the entire field of environmental health. Most of Washington's registered sanitarians received their education in the biological and physical sciences, or in agricultural science offered by colleges and universities in the Northwest.

METHODOLOGY

This reports is based on information gathered through the Department of Motor Vehicles, Division of Professional Licensing, at the time of licensure renewals. Data analysis and report writing were performed by the staff of the Health Manpower Project, Washington State Department of Health.

On May 12, 1969, 248 research forms were mailed with license renewals to all sanitarians licensed in the State of Washington. By January 1, 1970, 222 sanitarians had renewed their licensed for 1969/70. Two hundred and fourteen returned their research forms with their license renewals. This represents 95% of all sanitarians licensed by that date.

The survey upon which the report is based is considered a pilot study. Modifications in the questionnaire have been made for the survey of sanitarians licensed in Washington State for 1970/71. The figures in this report may be considered as representative for the counties and the State. Specific restrictions on the data will be stated.

Since this was a survey of only those sanitarians who have met the education or experience qualifications required for licensure, the data exclude an unknown number of sanitarians who are not licensed. Washington law does not forbid a person from using the title "sanitarian" although "registered sanitarian" cannot be used without licensure. Increasingly, persons considering themselves as sanitarians, however, have bachelor's degrees with emphasis on environmental health or the physical and biological sciences, with experience as a sanitarian, and have successfully completed licensure examinations (see page v). Persons currently entering the field with less than a baccalaureate education are usually working under the title of "sanitarian technician" or "sanitarian aide."

SUMMARY

Geographic Distribution: Of the 214 sanitarians responding to the questionnaire, 94% indicated their residence was Washington. The majority of the Washington residents lived in urban counties.

A profile of "the typical" licensed sanitarian can be constructed from data on Employment and Background Characteristics:

The "typical" licensed sanitarian in Washington is most likely to be:

residing in an urban county,
employed full time in environmental health,
working in public health at the county or district* level,
as often primarily engaged in administration or supervision as in field work,
licensed under the "grandfather clause,"**
between the ages of 45 and 54;

and have:

attained a Bachelor of Science Degree in Washington,
majored in a biological science or agriculture,
obtained his degree during the years 1950 to 1959,
taken four or more workshops or short-term courses,
taken no academic courses as part of his continuing education.

The topics mentioned above are discussed more fully in the report. A copy of the questionnaire is included as Appendix A, and selected data tables can be seen in Appendix B.

A follow-up study of sanitarians licensed in Washington has been undertaken during 1970 which will verify and elaborate the findings of this survey.

*An administrative public health area containing 2 or more counties.

**Where a sanitarian was employed as of January 1, 1960 as a full-time sanitarian and therefore could become licensed without taking the examination.

GEOGRAPHIC DISTRIBUTION

of Sanitarians Licensed in Washington

Of the 214 respondents, 200 (94%) indicated their residence was Washington State. The remaining respondents lived in the western states of California, Oregon, Arizona and Texas.

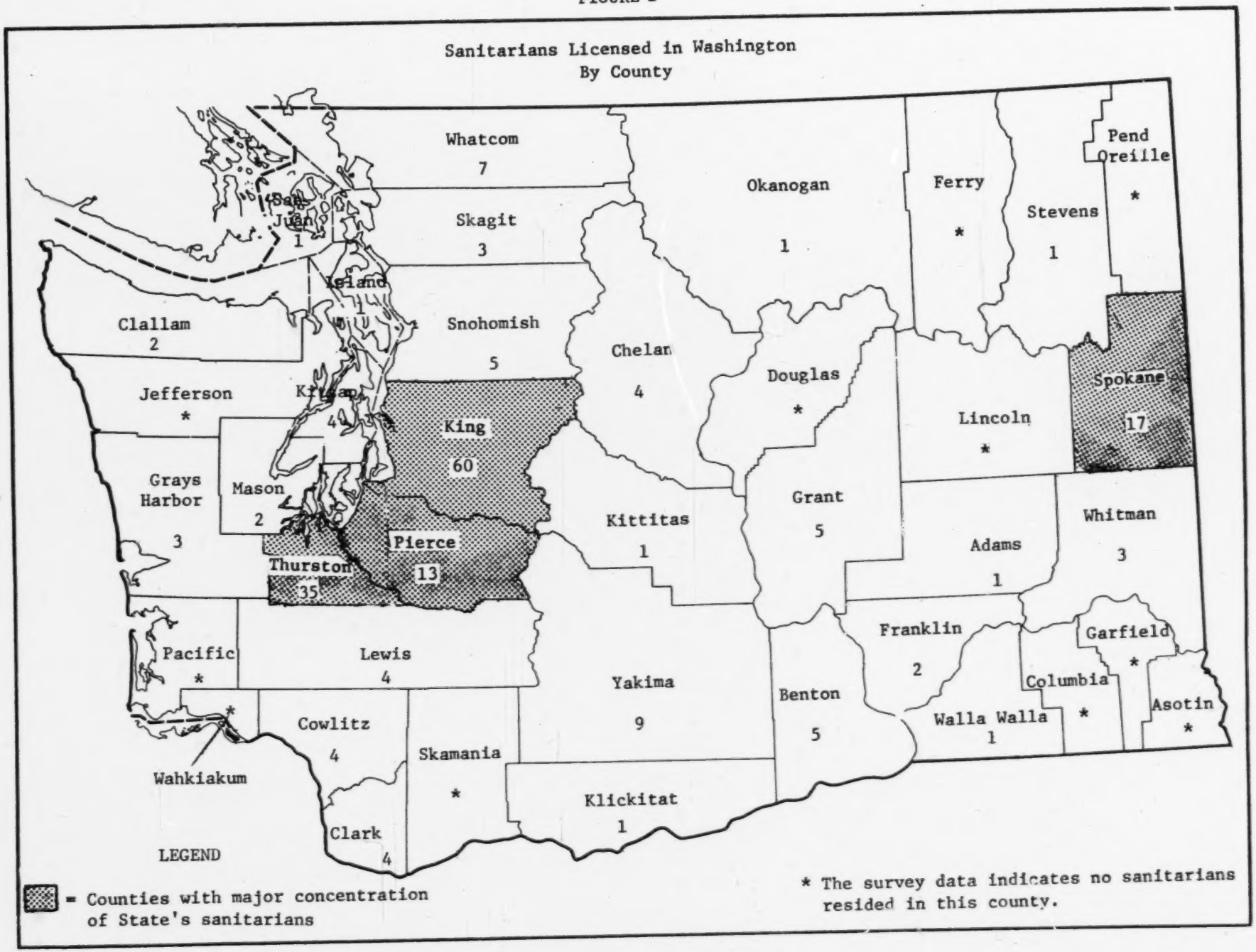
The majority (63%) of the sanitarians residing in Washington were living in the urban counties of King, Pierce, Spokane and Thurston. According to the data, there were no sanitarians in 11 counties. Distribution of the licensed sanitarians residing in Washington, by county, can be seen in the accompanying map (Figure 1).

The total number of respondents (214) will be discussed as one group.

PATTERNS in EMPLOYMENT

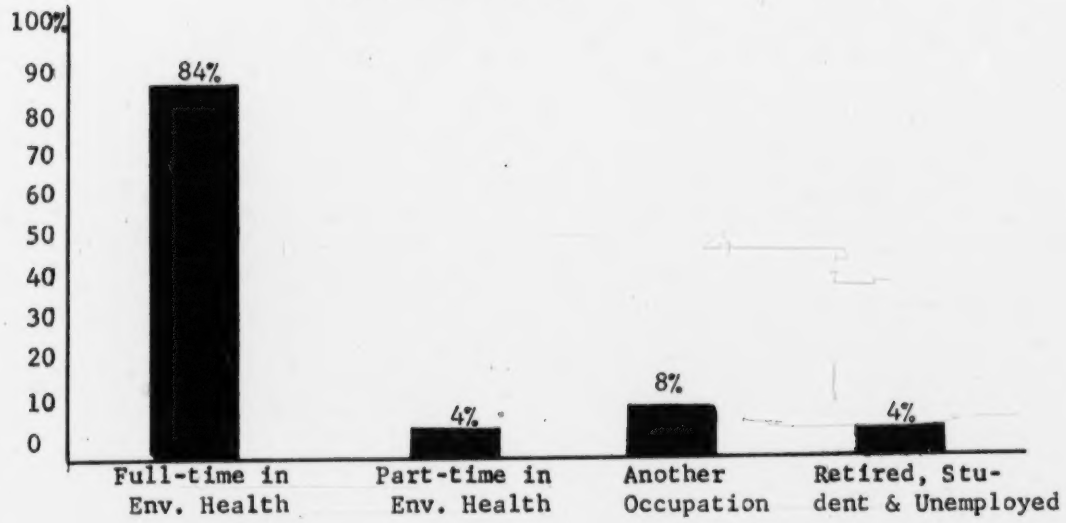
Employment Status. Nearly all the licensed sanitarians were employed full-time in environmental health. 8% were employed in an occupation outside of this field. Their occupations were diverse

FIGURE 1


Sanitarians Licensed in Washington
By County
Whatcom
7
Skagit
3
San Juan
1
Island
1
Snohomish
5
Clallam
2
Jefferson
*
Kitsap
4
King
60
Okanogan
1
Chelan
4
Douglas
*
Ferry
*
Stevens
1
Pend Oreille
*
Spokane
17
Lincoln
*
Grant
5
Adams
1
Whitman
3
Grays Harbor
3
Mason
2
Thurston
35
Pierce
13
Kittitas
1
Pacific
*
Lewis
4
Cowlitz
4
Wahkiakum
*
Skamania
*
Clark
4
Yakima
9
Klickitat
1
Benton
5
Franklin
2
Walla Walla
1
Columbia
*
Garfield
*
Asotin
*
LEGEND
= Counties with major concentration of State's sanitarians
* The survey data indicates no sanitarians resided in this county.

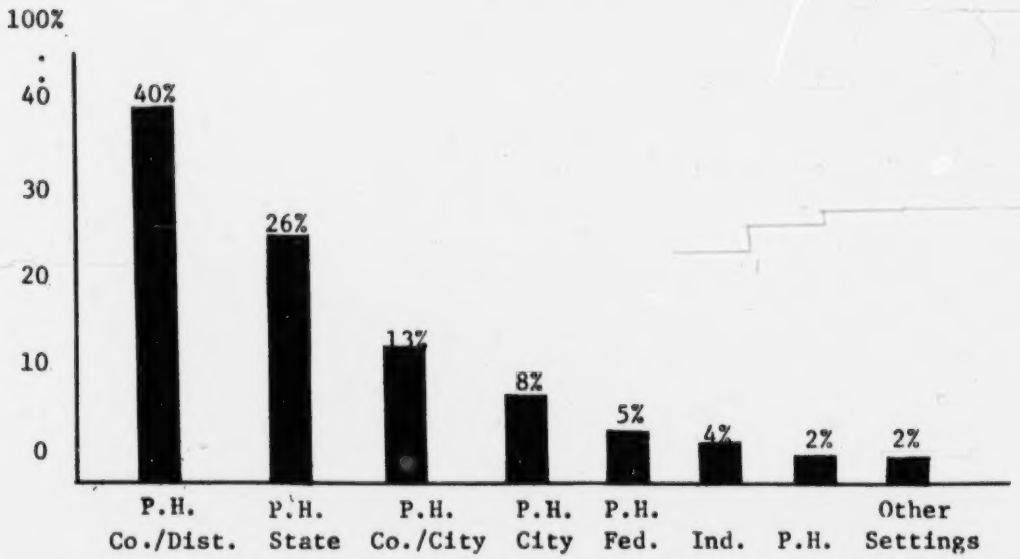
and included nursing home administrator, real estate broker and teacher (subject unspecified).

Figure 2
Employment Status



Work Setting. Nearly all the licensed sanitarians were employed in public health. The most frequently reported work setting was a health department at the county or district (two or more counties) level. The next most frequently reported setting was state government.

Figure 3
Work Settings of Employed Sanitarians



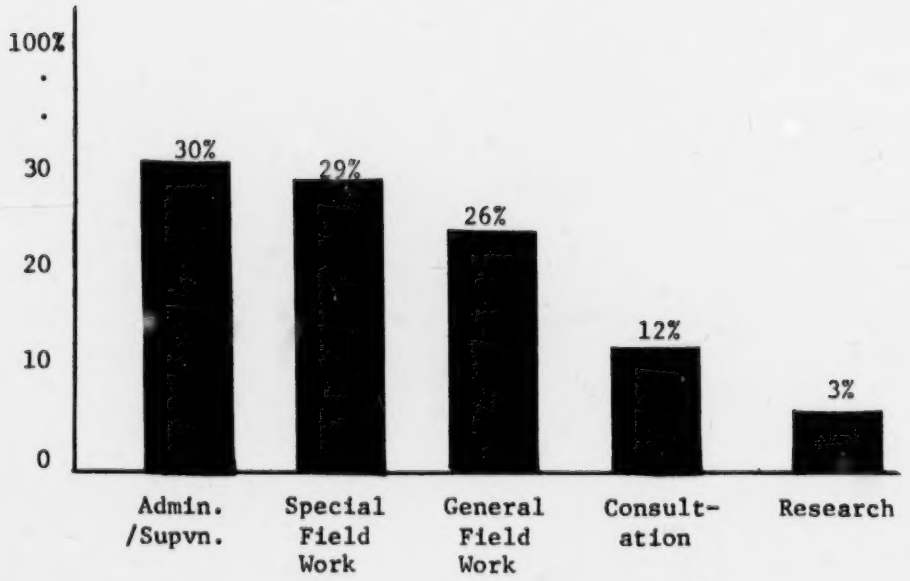
Undergraduate Major and Work Setting. The association of certain undergraduate majors with work settings was explored. Sanitarians who had majored in preventive medicine were most often working in public health at the federal or county/district level. Respondents reporting majors in public health or dual degrees which included public health were most often working within state government or at the county/district level. Respondents majoring in agriculture were working in all the various work settings. (Table 1, Appendix B.)

Primary Work Function and Work Setting. Some of the work settings were characterized by a greater preponderance of reported functions. Sanitarians were more often engaged in special field work (57%) in a city health department than in any other setting.

Sanitarians primarily engaged in general field work were most often employed in a county/district health department. Sanitarians working at the state and federal levels most frequently reported administration/supervision and consultation as their major functions. (Table 2 , Appendix B shows additional details.)

Primary Work Function. Sanitarians reported a wide range of primary work functions. Nearly a third specified that their major activity was administration/supervision, and a fourth reported general field work. Another fourth specified special field work as their major function.

Figure 4
Primary Work Function

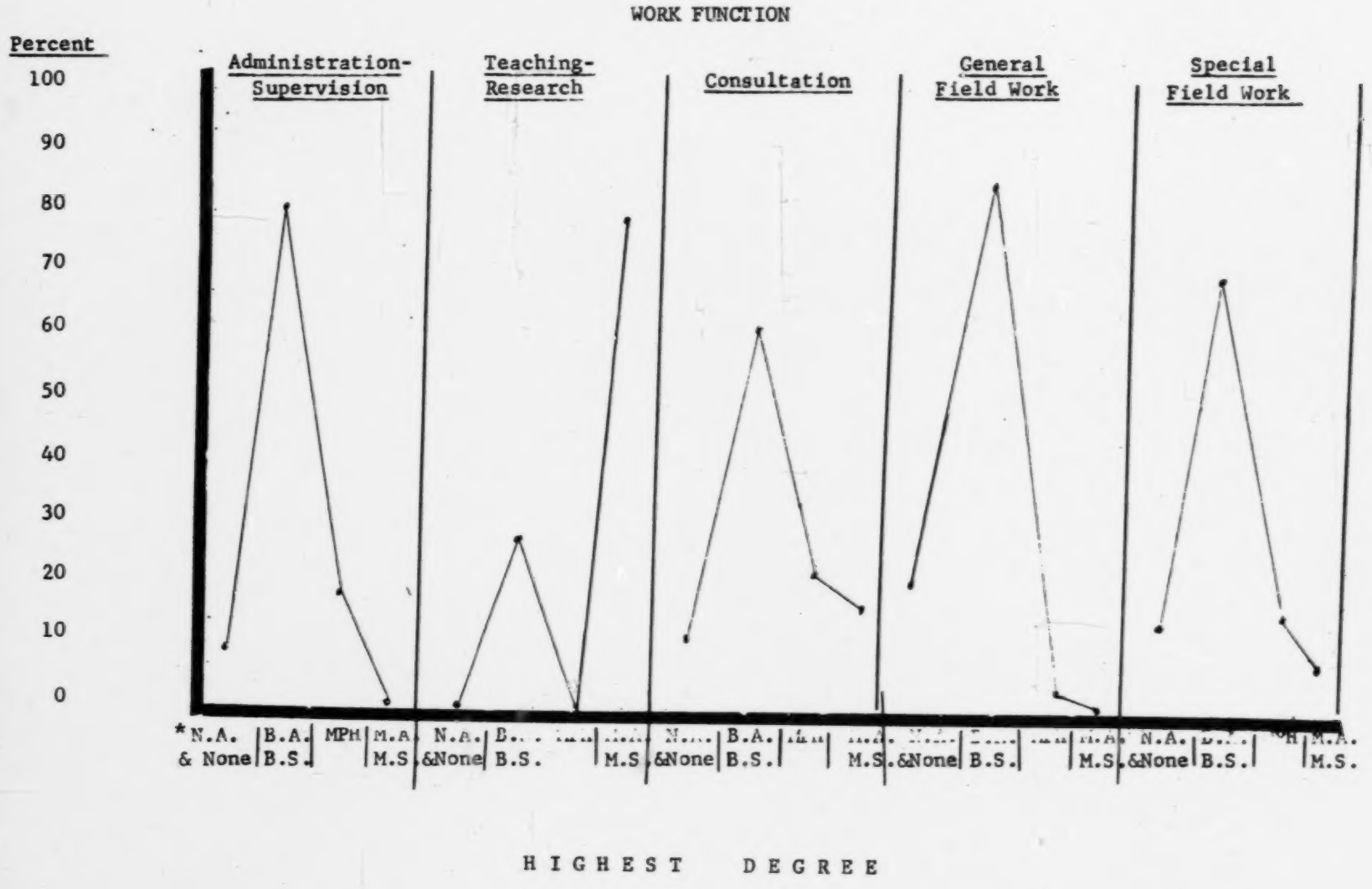


Previous and Current Work Functions. The association of previous work function in environmental health and the current one was examined. Respondents who reported their previous work function as administration/supervision usually were currently engaging in consultation or special field work, however. In addition, many sanitarians previously engaging in consultation were currently employed in administration/supervision. It appeared, therefore, that there was considerable mobility between the work functions of administration/supervision and consultation--in both directions. (Additional details, Table 3 , Appendix B.)

Highest Degree and Current Work Functions. Those engaging in administration/supervision, consultation or special field work were most likely to have earned advanced degrees.

Sanitarians engaged in general field work were most likely to report either no college degree or a baccalaureate degree without additional graduate work.

Figure 5
Highest Degree Reported by Sanitarians Licensed in Washington
According to Work Function



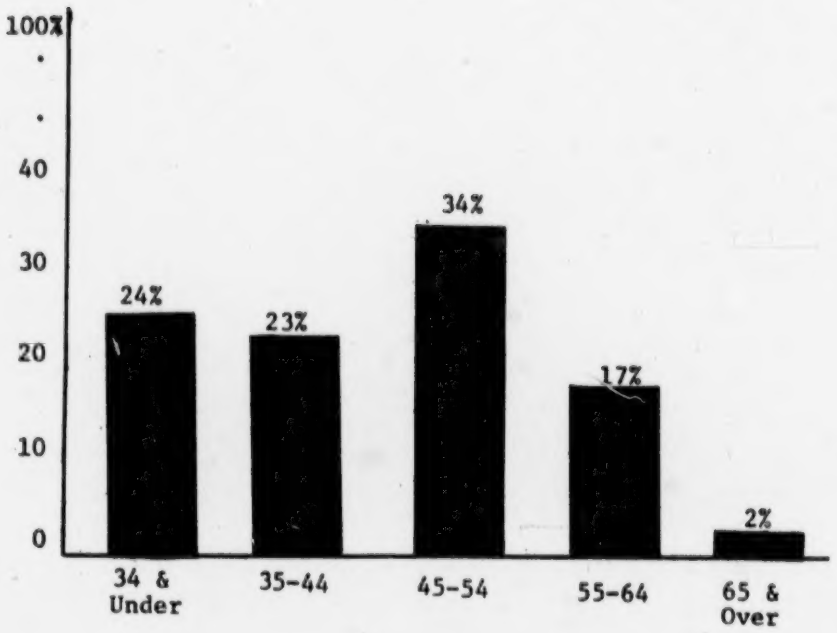
*N.A. = No Answer

BACKGROUND CHARACTERISTICS

Age:

About half of the sanitarians were under the age of 45, half between the ages of 45 and 64.

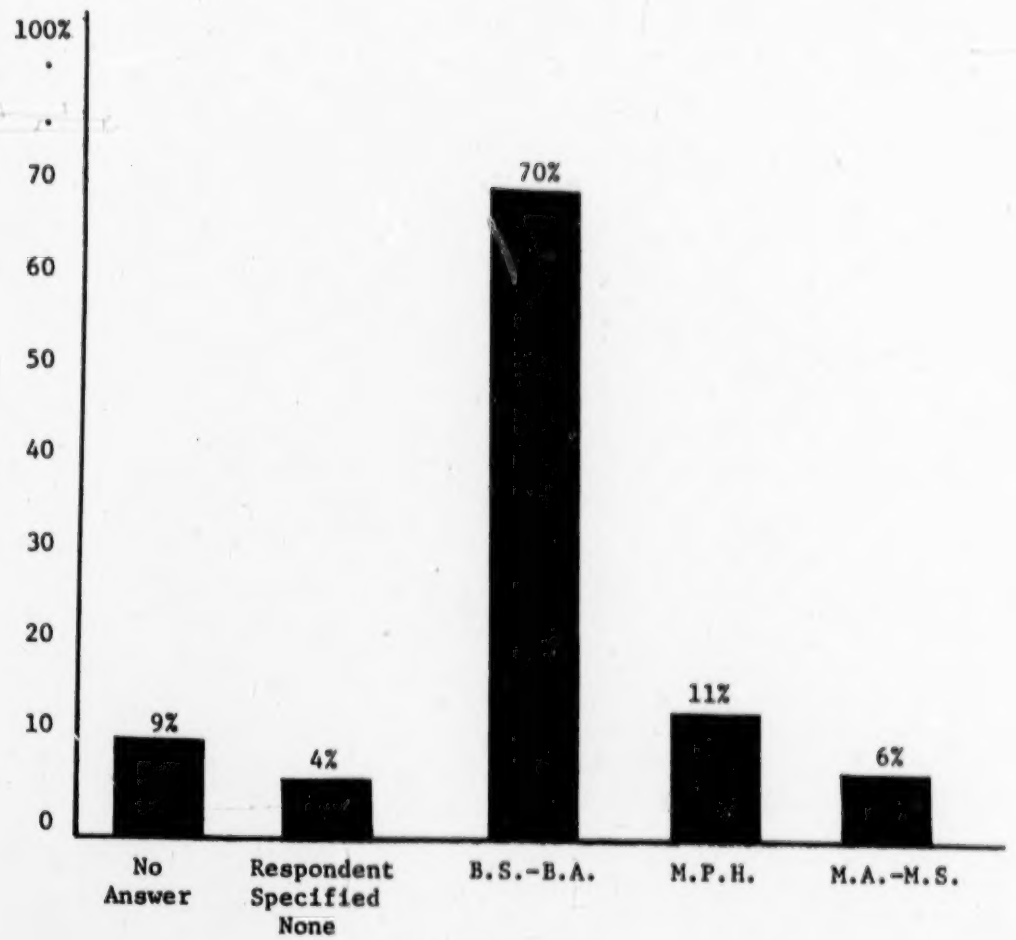
Figure 6
Age Distribution of Sanitarians



EDUCATION

Highest Degree. 70% had earned a Baccalaureate Degree as their highest educational attainment. Over three-fourths of the baccalaureate degrees were Bachelors of Science. 11% had earned Master in Public Health Degrees, primarily in the field of environmental health.

Figure 7
Highest Degree Earned



Age and Highest Degree. Younger sanitarians were somewhat more likely than their older counterparts to report advanced degrees (degrees beyond the baccalaureate). The differences were not pronounced. For example, 22% of the sanitarians under 35 and 18% of those age 45 to 64 had earned advanced degrees.

Undergraduate Major. Licensed sanitarians reported a wide variety of undergraduate scientific training. A small percentage reported undergraduate majors in the social sciences or in the arts. This was, however, usually followed by graduate training in the biological sciences. Undergraduate majors in the arts or social sciences were categorized as "other" along with such infrequently mentioned majors as "sanitary science," and "environmental health." [1]

Table I

Undergraduate Major Reported By Sanitarians Licensed in Washington

Major	No.	%
Biology & Related Fields*	41	19
Agriculture	43	20
Preventive Medicine	10	5
Public Health	18	8
Dual Degrees**	43	20
Other Types of Degrees	23	11
No Answer	36	17
	214	100%

*In addition to biology, microbiology and zoology were frequently reported.

**Major dual degree reported was bacteriology and public health.

[1] Increasing numbers of sanitarians will have undergraduate majors in sanitary science and environmental health, reflecting the development of training programs in these areas within Washington colleges and universities.

Age and Undergraduate Major. Younger sanitarians were more likely to have majored in a biological science or have a dual major, usually in public health and a science. 28% of the sanitarians age 34 and under and 17% of those between age 45 and 64 had majored in a biological science. Older sanitarians were more likely than their younger counterparts to have majored in agriculture: 8% of those 34 and under and 26% of those between the ages of 45 and 64 had majored in this field. (Table 4 , Appendix B)

Location of Institution Granting the Undergraduate Degree. Two-thirds (142) of the sanitarians licensed in Washington were graduated from that state's educational institutions. The next highest percentage was 5%, representing 10 sanitarians graduating from Idaho's institutions. A rather high percentage (14%), representing 29 respondents, failed to answer the questions regarding location of their undergraduate training. The remaining respondents reported a variety of states in which they had obtained their undergraduate degrees.

Year Undergraduate Degree Granted. A third of the sanitarians earned their baccalaureate degrees before 1950. 40% received their undergraduate degrees during the years 1950 to 1959, and 24% between 1960 and 1968.

CONTINUING PROFESSIONAL EDUCATION

The sanitarians were requested to specify the number of short-term courses/workshops they had taken in the last five years. Over three-fourths had taken one or more such courses. The respondents were also asked how many academic courses they had taken for college credit in the same time period. 17% had taken one or more formal academic courses.

Table II

Number of Courses	Type of Course: Short-term/Workshop*		Academic Courses	
	No.	%	No.	%
None	20	9	100	46
1-3	72	34	23	11
4 or more	97	45	36	17
No Answer	25	12	55	26
	214	100%	214	100%

* Including Inservice education.

It should be noted that there may have been confusion among the respondents regarding the questions upon which Table II is based. Some sanitarians may have included courses taken to meet degree requirements rather than those taken for continuing professional education. The figures should therefore be accepted with caution, and considered as maximum, rather than minimum figures on continuing education participation. Questions on this topic have been revised in the 1970 sanitarian questionnaire.

Age and Participation in Short-term Courses and Workshops. As their age increased, respondents became somewhat more likely to either specify that they had not participated in short-term courses and workshops, or to simply fail to answer the question. Among those who had taken such courses or workshops, however, persons over 45 were likely to have taken four or more. Younger sanitarians more often had taken between one and three.

Work Setting and Participation in Short-term Courses/Workshops. There was some variation in the participation in short-term courses/ workshops when the work setting was considered. Sanitarians employed in public health at the city and the county/district level were most likely to have participated in short-term courses and workshops. All of those employed by the city and 85% of those employed at the county/ district level had taken one or more courses. Additional information on percentage of participation according to work setting can be found in Table 5 , Appendix B.

LICENSURE

Method of Licensure. A majority (61%) of the sanitarians were licensed through the "grandfather clause," which means that they were employed full time as sanitarians in the State of Washington on January 1, 1960 and were not obligated to take a licensing examination. 37% were licensed through examination, and three persons obtained their licenses through reciprocity with another state.

Concurrent Licensure in Other States. Only 11% (22) of the sanitarians were currently licensed in another state. Of these, most were licensed in California (14), with 3 licensed in Oregon, and 5 in other states.

This concludes the report on sanitarians licensed in Washington. Sanitarians living in the state were urban dwellers with younger respondents having backgrounds in the biological sciences rather than agriculture. For information in addition to that discussed in this report, please contact the Health Manpower Project directly.

REFERENCES

1. "Public Health Sanitarians," an occupational brief published by Science Research Associates, Inc., 1963, No. 248.

2. "Washington State Board of Registered Sanitarians," 1959-67 Report, Division of Professional Licensing, Olympia, Washington.

3. "Analysis of the Professional Sanitarian," by Israel Light and Frank A. Butrico. Paper presented at the 26th Annual Educational Conference of the National Association of Sanitarians, Cincinnati, Ohio, June, 1962.

4. Health Resources Statistics, 1968, U. S. Department of Health, Education and Welfare, Public Health Service, Health Services & Mental Health Administration, Chapter 11, "Environmental Control," pp. 89-100.

5. "Study Environmental Science in the Pacific Northwest Washington State University." Brochure. Program in Environmental Science. Washington State University. Pullman, Washington, not dated.

6. "University of Washington Bulletin 1970-72 General Catalog Issue." University of Washington. Seattle, Washington.

7. Adapted from the U.S. Civil Service Commission, Position Classification Standards, Sanitarian Series GS-688 (October, 1969)

APPENDICES:

A. The Questionnaire

B. Selected Data Tables

A. THE QUESTIONNAIRE

Research Form (Jan. 1969) PLEASE RETURN WITH LICENSURE FORM

Name_____

Professional Address: State_____City_____County_____Zip Code_____

PLEASE CIRCLE NUMBER PRECEDING A STATEMENT OR FILL IN REPLY WHERE INDICATED

FILL IN BOTH FRONT AND REVERSE SIDES OF FORM

A. Age_____

B. Sex: 1. Male
2. Female

C. Please circle all degrees attained:

	Give City and State of Granting Institution:	Year Granted:
1. B.A. or B.S. Major_____	_____	_____
2. Teaching Certificate	_____	_____
3. M.P.H.		
a. Environ.Health	_____	_____
b. Health Education	_____	_____
c. Other (Specify) _____	_____	_____
4. M.A. or M.S. Field_____	_____	_____

D. Within the Last Five Years, How Many of the Following Courses Have You Attended:

Academic Courses: (college credit)
1. None
2. One to three
3. Four or more

Short-term courses (inservice educ.)
1. None
2. One to three
3. Four or more

E. License in Washington Granted by:
1. Grandfather Clause
2. Examination
3. Reciprocity (Through which State) _____

F. Currently Licensed in Other States:
1. No 2. Yes (Specify)_____

G. Are you Currently Employed:
1. Full-time in Environmental Health
2. Part-time in Environmental Health
3. In Another Occupation (Specify) _____
4. Retired, Student, or Unemployed

PLEASE CONTINUE ON REVERSE SIDE →

H. In Which Work Setting Are You Active:
A. Public Health
1. Federal
2. State
3. County
4. District
5. City
B. Industry
C. Federal Government
1. Dept. of Agriculture
2. Dept. of Interior
D. Other (Specify) _____

I. What is Your Current Primary Work Function?
1. Administration and Supervision
2. Teaching and Research
3. Consultation
4. Field Work: General Environmental Health
5. Field Work: Special Environmental Health
a. Food
b. Water
c. Sewage
d. Air
e. Shelter
f. Vector
g. Solid Waste
h. Recreation

J. Have You Held Previous Full-time Employment in Environmental Health? (Exclude summer or temporary jobs)
1. Yes
2. No (Go on to L.)

K. If Yes, Circle the Primary Work Function Performed in Last Employment:
1. Administration and Supervision
2. Teaching and Research
3. Consultation
4. Field Work: General Environmental Health
5. Field Work: Special Environmental Health
a. Food
b. Water
c. Sewage
d. Air
e. Shelter
f. Vector
g. Solid Waste
h. Recreation

L. If You Have Held Previous Full-time Employment in Another Occupation (Excluding summer or temporary jobs), Please Specify which:
_____
_____

M. Check the Primary Work Function in Your Last Occupation:
1. Administration or Supervisory
2. Teaching or Supervisory
3. Other (Specify)_____

B. SELECTED DATA TABLES

TABLE 1

WORK SETTINGS OF EMPLOYED SANITARIANS
BY UNDERGRADUATE MAJOR

Work Setting	Major: Biological Sciences No.	%	Agri-culture No.	%	Prevent. Med. No.	%	Public Health No.	%	Dual Degrees No.	%	Other No.	%	No Answer No.	%
Pub. Hlth.(PH)	0	0	0	0	1	14	0	0	1	3	0	0	1	4
PH/Federal	1	3	1	2	2	29	0	0	2	5	1	5	1	4
PH/State	10	25	15	37	0	0	4	30	11	29	4	18	4	15
PH/County-Dist.	18	46	11	27	2	29	7	54	16	42	9	40	12	44
PH/City	3	8	6	15	0	0	0	0	1	3	1	5	3	11
PH/County-City	6	15	4	10	1	14	0	0	3	8	6	27	5	18
Industry	0	0	3	7	0	0	1	8	3	8	1	5	0	0
Other	1	3	0	0	1	14	1	8	0	0	0	0	1	4
No Answer	0	0	1	2	0	0	0	0	1	2	0	0	0	0
Totals	39	100%	41	100%	7	100%	13	100%	38	100%	22	100%	27	100%

TABLE 2

WORK SETTINGS OF EMPLOYED SANITARIANS
BY PRIMARY WORK FUNCTION

Work Setting	Primary Work Function: Admin.-Superv. No.	%	Teach.-Research No.	%	Consult-ation No.	%	General Field Work No.	%	Special Field Work No.	%	Not Applic. No.	%	No Answer No.	%	Totals No.	%
Pub. Hlth.(PH)	2	67	0	0	0	0	1	33	0	0	0	0	0	0	3	100
PH/Federal	3	38	0	0	3	38	1	12	1	12	0	0	0	0	8	100
PH/State	14	29	1	2	14	29	3	6	15	32	1	2	0	0	48	100
PH/County-Dist.	17	22	0	0	2	3	36	48	17	23	3	4	0	0	75	100
PH/City	2	14	0	0	0	0	4	29	8	57	0	0	0	0	14	100
PH/County-City	11	44	0	0	1	4	2	8	11	44	0	0	0	0	25	100
Industry	4	50	0	0	0	0	2	25	1	13	0	0	1	12	8	100
Other	0	0	3	75	1	25	0	0	0	0	0	0	0	0	4	100
No Answer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100

TABLE 3

PRIMARY WORK FUNCTIONS OF EMPLOYED SANITARIANS
BY PREVIOUS PRIMARY WORK FUNCTIONS

Current Function	Previous Function: Admin.-Superv. No.	%	Teach.-Research No.	%	Consultation No.	%	General Field Work No.	%	Special Field Work No.	%	Not Applic. No.	%	No Answer No.	%
Admin.-Superv.	13	54	0	0	5	63	11	21	6	26	15	21	3	43
Teach.-Research	1	4	0	0	0	0	0	0	3	13	0	0	0	0
Consultation	5	21	0	0	2	25	8	15	2	9	4	6	0	0
Gen. Field Work	1	4	1	100	1	12	18	34	5	22	22	31	1	14
Spec. Field Work	4	17	0	0	0	0	13	24	6	26	28	39	3	43
Not Applicable	0	0	0	0	0	0	1	2	1	4	2	3	0	0
No Answer	0	0	0	0	0	0	2	4	0	0	0	0	0	0
Totals	24	100%	1	100%	8	100%	53	100%	23	100%	71	100%	7	100%

TABLE 4

AGES OF LICENSED SANITARIANS
BY THEIR UNDERGRADUATE MAJORS

Age	Major: Biological Sciences No.	%	Agriculture No.	%	Prevent. Med. No.	%	Public Health No.	%	Dual Degrees No.	%	Other No.	%	No Answer No.	%	Total No.	%
34 & Und.	14	27	4	8	7	14	4	8	16	31	3	6	3	6	51	100
35-44	9	18	10	20	2	4	10	20	11	22	6	12	2	4	50	100
45-64	18	16	28	26	1	1	4	4	16	15	14	13	27	25	108	100
65 & Over	0	0	1	33	0	0	0	0	0	0	0	0	2	67	3	100
No Ans.	0	0	0	0	0	0	0	0	0	0	0	0	2	100	2	100

TABLE 5

WORK SETTINGS OF EMPLOYED SANITARIANS
BY NUMBER OF SHORT-TERM COURSES/WORKSHOPS TAKEN

Work Setting	No. of Courses: None No.	None %	1-3 No.	1-3 %	4+ No.	4+ %	No Answer No.	No Answer %	Totals No.	Totals %
Pub. Hlth.(PH)	0	0	1	33	2	67	0	0	3	100
PH/Federal	0	0	6	75	2	25	0	0	8	100
PH/State	6	12	11	23	23	48	8	17	48	100
PH/County-Dist.	4	5	30	40	34	45	7	10	75	100
PH/City	0	0	7	50	7	50	0	0	14	100
PH/County-City	3	12	8	32	12	48	2	8	25	100
Industry	1	12	2	25	2	25	3	38	8	100
Other	0	0	0	0	4	100	0	0	4	100
No Answer	0	0	0	0	2	100	0	0	2	100